

ABSTRACT OF THE DISCLOSURE

To optimize the resources of an optical transmission network using wavelength division multiplexing, assigning carrier frequencies to signals to be transmitted consists in associating N sets of optical frequencies of the comb with N respective ranges of consecutive error rate values, each of the sets comprising frequencies generating a mean error rate in the associated range, defining a measured signal transmission constraint level that is a function of the transmission constraint parameter(s) and may take N distinct values referred to as constraint values, associating the N constraint values in increasing order respectively with the N sets of frequencies in decreasing order of the error rate values of the associated N ranges, assigning any signal to be transmitted a constraint value obtained by applying the measurement, and assigning the signal to be transmitted a carrier frequency belonging to one of the sets of frequencies that is associated with a constraint value at least equal to the constraint value assigned to the signal to be transmitted.